DRILL HOLES

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PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal at the intersection of US1 (Belair Road) and MD 152 (Mountain Road) in Harford County, Maryland.
US1 is considered to run in a north/south direction.

Intersection modifications include widening of southbound US 1 and island relocations along north and southbound US1.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA eight (8) phase, full-traffic-actuated mode. There will be a exclusive lead left turn phase for the southbound movement and an exclusive lag left turn phase for the northbound movement of US 1. The US 1through movements will operate concurrently. There will be an exclusive left turn phases for both left turn movements of MD 152. The MD 152 through movements will operate concurrently.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, video detection equipment, and (2) four-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location. The existing CCTV camera is to be relocated.

III. SPECIAL NOTE:

The Contractor shall notify Mr. Robert Snyder of SHA at 410-787-7635 to arrange for the phone drop installation.

The Contractor is to provide Mr. Snyder with the nearest street number, zip code, and telephone number.

CONTACT LIST

The contact persons for District #4 are as follows:

Mr. Randall Scott
Assistant District Engineer - Traffic
410-321-2781

Mr. Mike Pasquariello
Assistant District Engineer - Utility
410-321-3460

Mr. Steve Marciszewski
Assistant District Engineer - Maintenance
410-321-2761

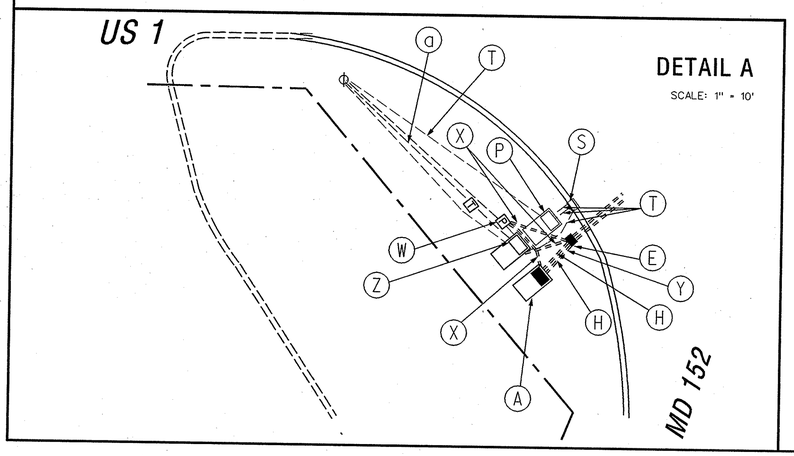
Mr. Ed Rodenhizer
MD-SHA-Signal Shop
410-787-7652

Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

EQUIPMENT LIST

Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
1	EA	818	27 ft. steel mast arm pole with a 50 ft. mast arm.
2	EA	818	27 ft. steel mast arm pole with a 60 ft. mast arm.
1	EA	---	3 ft. pole extension.
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, and two (2) four-channel loop detector amplifiers and video detection equipment (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).
10	EA	814	12 in., one-way, three section (RA,YA,GA) (LED) adjustable black faced traffic signalhead with mast arm mounting hardware and tunnel visors.
8	EA	814	12 in., one-way, three section (R,Y,G) (LED) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
4	EA	---	Video Detection Camera and cable (1- 400 LF, 2- 200 LF, 1- 300 LF)
1	LF	---	Video detector retro -fit w/power.
1	EA	---	Video detector interface panel
300	EA	---	CCTV Cable.
6	EA	813	30 in. x 36 in. R-3-5(L) sign with mast arm mounting hardware.
3	EA	813	16 in. x Var D-3(1) dual faced sign with mast arm mounting hardware.
2	EA	813	24 in. x 51 in. shield assembly with pole , mounting hardware.
2	EA	813	30 in. x 51 in. shield assembly sign with pole mounting hardware.
2	EA	813	36 in. 75 in. shield assembly sign with pole mounting hardware.
2	EA	813	48 in. x 75 in. shield assembly sign with pole mounting hardware.
1	EA	813	30 in. x 42 in. W9-2(4)(R) sign with mast arm mounting hardware.
8	EA	---	Non-Invasive Micro -loop probe (set of 3) with 1000 ft. lead-in cable.
3	EA	806	20 ft. luminaire arm.
3	EA	806	250 W H.P.S. lamp and luminarie.
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
4	CY	205	Test pit excavation.
16	EA	811	Handhole.
60	LF	810	1-conductor electrical cable (No. 4 A.W.G.) (3 pieces).
875	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
2925	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
390	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
40	LF	805	2 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
225	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
690	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit - slotted in roadway.
450	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
350	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - Slotted in roadway
100	LF	---	1-1/4 in. duct.
16.5	CY	801	Concrete foundation for traffic signal equipment.
5	EA	804	Ground rod -⅝in. diameter x 10 ft. length.
1	EA	807	Electrical utility service equipment (120/240 V, one phase, three wire system) for an underground) electrical power service as per MD-SHA Typical No. 807.05-01 (200 amp. electrical pedestal).
185	LF	549	24 in. wide HAPPTPM - white for stop line.
3	EA	---	Remove and dispose of existing concrete foundation 12 inches below grade.
Lump Sum	LS	---	Remove and dispose of existing signal equipment.
Lump Sum	LS	---	Relocate existing CCTV camera.

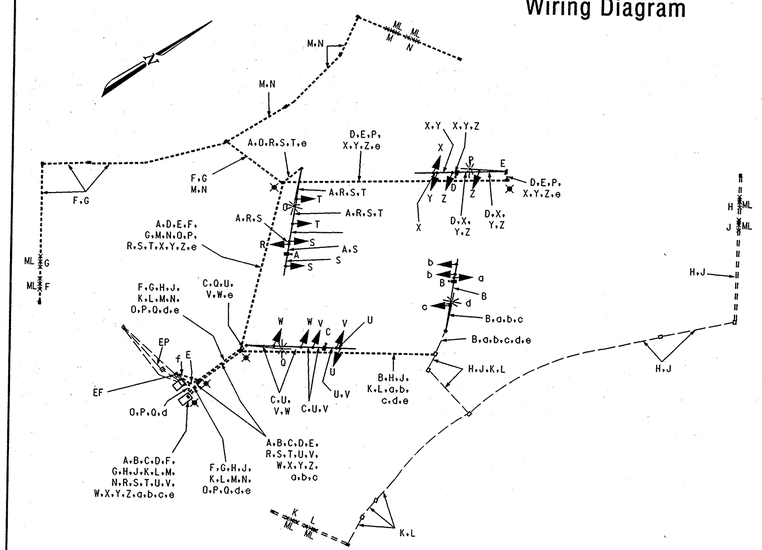


DETAIL A
SCALE: 1" = 10'

Phase Chart

Phase 2 & 5	R	R	G	G	R	R	R	R	←
5 Change	R	R	Y	G	R	R	R	R	↙
Phase 2 & 6	R	G	R	G	R	R	R	R	←
2 & 6 Change	R	G	R	Y	R	R	R	R	→
Phase 1 & 6	G	G	R	R	R	R	R	R	↗
1 & 6 Change	Y	Y	R	R	R	R	R	R	→
Phase 3 & 7	R	R	R	R	G	R	G	R	↘
3 & 7 Change to Phase 3 & 8 or Phase 4 & 7 or Phase 4 & 8									
Phase 3 & 8	R	R	R	R	G	G	R	R	↑
3 Change	R	R	R	R	Y	G	R	R	↑
Phase 4 & 7	R	R	R	R	R	R	G	G	↓
7 Change	R	R	R	R	R	R	Y	G	↓
Phase 4 & 8	R	R	R	R	R	G	R	G	↕
4 & 8 Change	R	R	R	R	R	Y	R	Y	↕
Flashing Operation	FL/R	FL/Y	FL/R	FL/Y	FL/R	FL/R	FL/R	FL/R	✣

Wiring Diagram



A, B, C, D — Video Detector Cable

E — CCTV Camera Cable

F, K, G, L, H, M, J — Non-Invasive Micro-loop Detector Lead-in Cable

O, P, Q, d — 2-Conductor Tray Cable (No. 12 A.W.G.)

R, W, S, X, T, Z, U, a, V, b, c — 5-Conductor Electrical Cable (No. 14 A.W.G.)

e — Bare Copper Ground Wire (No. 6 A.W.G.)

f — 1-Conductor (No. 4 A.W.G.) (3 pieces) for Traffic Signal Electrical Service

EF — Existing Underground Electrical Service By BGE

Proposed Grounding Rod

ML — Micro-loop Detector (Non-Invasive)

EP — Existing Phone Service By Verizon

NOTE

These plans are approved for construction for a period of one (1) year from the date of approval. Should construction not begin within this time frame these plans shall be null and void without a re-review from the Traffic Engineering design Division.

The Traffic Group
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1-800-583-8411
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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

US 1 (Blair Rd) at MD 152 (Mountain Rd)

GENERAL INFORMATION SHEET

SCALE N/A DATE 3-8-07 CONTRACT NO. BW996M82

DESIGNED BY Frank Hoeckel
DRAWN BY Frank Hoeckel
CHECKED BY
F.A.P. NO. N/A

COUNTY Harford
LOG MILE 12000101.35
T.I.M.S. NO. H-264
TOD NO.

DRAWING NO. TS GI-681-J

SHEET NO. 2 OF 2

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